Permit Application

for

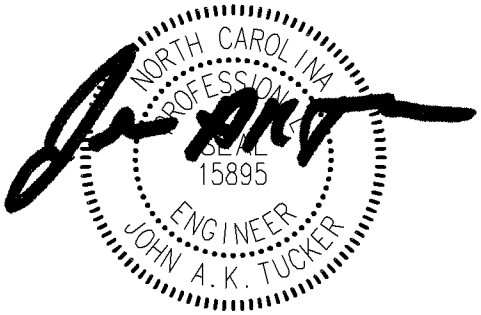
Rowland LCID Landfill Treatment and Processing Facility

Raleigh, NC

Owner

ROWLAND LANDFILL INC
2730 ROWLAND RD STE 105
RALEIGH NC 27615-5631

Project Number
0623



December 6, 2006

PRELIMINARY
NOT FOR CONSTRUCTION

John A.K. Tucker, P.E.
Consulting Engineer
Post Office Box 297
Fuquay-Varina, North Carolina 27526
Voice (919) 567-0483
Fax (919) 567-3611

City of Raleigh Zoning Approval

City Of Raleigh
North Carolina

August 16, 2000

Bryan Odom
Cavanaugh
1426 Commonwealth Dr., Suite B
Wilmington, NC 28412

Re: Rowland Landfill
Gresham Lake Road
Raleigh, NC

Dear Mr. Odom:

The Rowland Landfill located on Gresham Lake Road is zoned Industrial-1 with a Special Highway Overlay District. This zoning district allows a wide variety of uses including a landfill. The current use of the property as a landfill is consistent with the Industrial zoning.

If I may be of further assistance, please call.

Sincerely,

Larry Strickland
Zoning Inspector Supervisor

Wake County Permit to Operate \

and

Deed Information

COPY

COUNTY OF WAKE
RALEIGH, NORTH CAROLINA
COMMUNITY DEVELOPMENT SERVICES
TELEPHONE (919) 755-6838

March 9, 1988

Mr. Bill Brower
City of Raleigh
Inspections Department
P. O. Box 590
Raleigh, N.C. 27602

RE: Rowland Demolition Landfill Inquiry

Dear Mr. Brower:

Enclosed is a copy of the permit issued by this office to Mr. Rowland for operation of a demolition landscape debris landfill. Regulatory authority over this site has been specifically delegated to the County by the N.C. Solid and Hazardous Waste Branch of the N.C. Department of Health Services. Extra copies of the operations plan may be obtained from Mr. Rowland at 876-1877.

If I may be of further assistance to you, please feel free to contact me at 755-6838.

Sincerely,

Robert E. Tucker, P.E.
Assistant County Engineer

RET/mb

Enclosure

Post Office Box 550, Raleigh, North Carolina 27602

BOOK 3155 PAGE 988

COUNTY OF WAKE

RALEIGH, NORTH CAROLINA
Community Development Services
Telephone (919) 755 6838

CERTIFIED COPY OF SOLID WASTE MANAGEMENT PERMIT

I do hereby certify that the attached Permit is an exact and true copy of Permit No. 83-001.

W. Henry Wells, Jr., Chief Engineer
Engineering Division,
Wake County Community Development Services

Sworn and subscribed before me this 14 day of July, 1983

Mark G. Dawson
Notary Public

My commission expires: 2/21/87 Seal

MARK G. DAWSON NOTARY PUBLIC WAKE COUNTY, N.C.

BOOK 3155 PAGE 987

Permit No. 83-0001

Date Issued 7/14/83

SOLID WASTE MANAGEMENT PERMIT

CONDITIONS:

1. That this permit be recorded in the office of the Register of Deeds of Wake County.

2. That access to the site be barricaded or manned when not in use.

3. That operation be in accordance with 10 N.C.A.C. 10G Section .0507.

4. That materials to be disposed of in the landfill be limited to demolition and land clearing debris (i.e. no paper or other garbage).

5. That there be no discharge of water from the landfill to Perry Creek without an NPDES Permit.

BOOK 3155 PAGE 985 PERMIT NO. 83-001

DATE ISSUED July 14, 1983

Bill Rowland
5610 Cold Springs Rd
Ral N.C. 27609

WAKE COUNTY

COMMUNITY DEVELOPMENT SERVICES

ENGINEERING DIVISION

P.O. Box 550 Raleigh 27602

PRESENTED FOR REGISTRATION
AUG 10 11 08 AM '83
R.B. MCKENZIE, JR.
REGISTER OF DEEDS
WAKE COUNTY, N.C.

SOLID WASTE MANAGEMENT PERMIT

Bill I. Rowland is hereby issued a permit to operate a Demolition-Landscape Landfill located S.R. 2013, in accordance with Article 13B of the General Statues of North Carolina and all rules promulgated thereunder. The facility is located on the below described property.

Parcel One

BEGINNING at a point in the center of the right of way of State Road 2013 and being the common corner of Rea Construction Company and Rowland Landfill, Inc; runs thence North 85 degrees 12 minutes East 171.43 feet to a point in the center of the right of way of State Road 2013; thence North 83 degrees 32 minutes East 278.50 feet to a point and being the north-eastern corner of the tract of land as hereinafter described; runs thence along the property line of Rea Construction Company, South 03 degrees 40 minutes West 621.56 feet to a point and being the southeastern corner of the tract of land as hereinafter described; thence North 81 degrees 23 minutes West 524 feet to a point and being the southwestern corner of the tract of land as hereinafter described; thence North 12 degrees 32 minutes East 508.18 feet to the point and place of beginning, containing 6.20 acres more or less, according to a survey prepared by Lovett & Bunn, Inc., Registered Land Surveyor, dated July 24, 1972, entitled "Property of Rowland Landfill, Inc."

(Continued on Back)

W. Henry Wells, Jr. Chief Engi
Engineering Division,
Wake County Community Developm
Services

Parcel Two

BEGINNING at a point in the center line of State Road 2013, said point being witnessed by an iron pin South 12 degrees 32 minutes West 31.5 feet in the southern right of way of said road, said point being a common corner in said road with the Nichols property, runs thence with the center line of said State Road 2013 North 85 degrees 12 minutes East 150 feet to a point, the beginning point of Parcel No. One, described herein; thence South 12 degrees 33 minutes 46 seconds West with the line of siad Parcel One 508.28 feet to an iron stake; thence South 81 degrees 28 minutes 56 seconds East 760.58 feet to an iron stake, a common corner with Rea Construction Company; thence with the line of Rea Construction Company South 21 degrees 37 minutes 39 seconds West 755.88 feet to an iron stake; thence continuing with the line of Rea Construction Company South 79 degrees 40 minutes 08 seconds West 227.03 feet to an iron stake; thence North 86 degrees 05 minutes 54 seconds West 376.02 feet to an iron stake; thence continuing North 86 degrees 05 minutes 54 seconds West 150 feet to an iron stake a corner with Bill I. Rowland and wife; thence North 06 degrees 26 minutes 06 seconds East 503.75 feet to an iron stake, a corner with Rowland and Nichols,; thence North 12 degrees 33 minutes 46 seconds East 822.08 feet with the line of Nichols to the point and place of beginning, containing 17.01 acres more or less according to survey prepared by J. Fred Davis, Jr., Inc. dated April 4, 1972.

Operational Plan

ROWLAND LANDFILL
LAND CLEARING AND INERT DEBRIS LANDFILL

Hours of Operation 7:00 AM to 7:00 PM Monday - Saturday

Owner:

ROWLAND LANDFILL INC
2730 ROWLAND RD STE 105
RALEIGH NC 27615-5631

Phone 919-876-1877

Emergency Numbers:

Wake County Solid Waste	851-6186	
Raleigh Fire Department	911	Emergency
	831-6115	Non-Emergency
Wake County Emergency Mgt	856-6480	
Environmental Health Emergency Response/Hazardous Waste	856-7410	

Permit Recording

Prior to receiving land clearing and inert debris in this facility, the license shall be recorded in the Wake County Register of Deeds in accordance with GS130-66.21.

Project Use of the Facility After Closing

Currently there are no plans for use of the site after closing. The site will be closed in accordance with state regulations. This will include placement of final cover (12" of soil) over the waste cells and stabilization with permanent seeding to prevent erosion.

Types of Waste That Can Be Accepted

A portion of the facility will be permitted to receive land clearing waste, inert debris, untreated wood and yard waste. Examples of this type of waste stream include stumps, limbs, framing lumber, brick, block and uncontaminated soil.

All trucks entering the facility will be examined to ensure only permitted waste is allowed inside. Any unacceptable waste found in the facility shall be separated and disposed of in a manner consistent with Wake County Division of Solid Waste rules.

Access Roads

The access road shall consist of a prepared subgrade and 6" of ABC stone as an all weather surface. The road is to be inspected weekly for rutting and other signs of failure. These areas will be repaired in a timely fashion.

Dust Control

Should excessive dust be generated (visible clouds behind moving vehicles) a water truck will be used to wet down the access road and other areas. The existing pond on site will be used as a source for water.

Rock Excavation

Blasting of rock is prohibited in this facility.

At all times the facility shall be operated in accordance with the following:

Rules 15A NCAC13B - Section .0566

.0566 OPERATIONAL REQ. FOR LAND CLEARING AND INERT DEBRIS LANDFILLS

Land Clearing and Inert Debris (LCID) landfills shall meet the following operational requirements:

(1) Operational plans shall be approved and followed as specified for the facility.

(2) The facility shall only accept those solid wastes which it is permitted to receive.

(3) Solid waste shall be restricted to the smallest area feasible and compacted as densely as practical into cells.

(4) Adequate soil cover shall be applied monthly, or when the active areas reaches one acre in size, whichever occur first.

(5) 45 calendar days *(revised to meet Wake County Standards)* after completion of any phase of disposal operations, or upon revocation of a permit, the disposal area shall be covered with a minimum of two feet (revised to meet Wake County Standards) of suitable soil cover sloped to allow surface water runoff in a controlled manner. The Division may require further action in order to correct any condition which is or may become injurious to the public health, or a nuisance to the community.

(6) Adequate erosion control measures, structures, or devices shall be utilized to prevent silt from leaving the site and to prevent excessive on site erosion.

(7) Provisions for a ground cover sufficient to restrain erosion must be accomplished within 30 working days or 45 calendar days *(revised to meet Wake County Standards)* upon completion of any phase of landfill development.

(8) The facility shall be adequately secured by means of gates, chains, berms, fences, etc. to prevent unauthorized access except when an operator is on duty. An attendant shall be on duty at all times while the landfill is open for public use to assure compliance with operational requirements and to prevent acceptance of unauthorized wastes.

(9) Access roads shall be of all-weather construction and properly maintained.

(10) Surface water shall be diverted from the working face and shall not be impounded over waste.

(11) Solid waste shall not be disposed of in water.

(12) Open burning of solid waste is prohibited.

(13) The concentration of explosive gases generated by the facility shall not exceed:

(a) Twenty-five percent of the lower explosive limit for the gases in facility structures.

(b) The lower explosive limit for the gases at the property boundary.

(14) Leachate shall be properly managed on site through the use of current best management practices.

(15) Should the Division deem it necessary, ground water or surface water monitoring, or both, may be required as provided for under Rules .0601 and .0602 of this Subchapter.

(16) A sign shall be posted at the facility entrance showing the contact name and number in case of an emergency and the permit number.

Methane Gas Monitoring

The owner of the landfill will monitor the explosive gas at the landfill structures and at or near the landfill boundary on a quarterly basis. Permanent probes shall be placed between the disposal areas and the property line at a 400 to 500 foot spacing. The permanent probes will consist of a

plastic stand pipe similar to a piezometer used for groundwater detection. A typical permanent methane probe is detailed in the operation drawings. The permanent probe will be constructed to groundwater depth. A 4" to 6" diameter hole will contain a one (1) inch PVC pipe. The hole will be backfilled with non-carbonate pea gravel to a depth of two (2) feet below the existing ground surface, with a bentonite seal one foot thick above it. The remainder of the hole will be backfilled with in-situ soils. A steel protecting pipe or box section with a locking vented cover will be installed over the PVC pipe. The one (1) inch PVC pipe will extend approximately three (3) feet above the existing grade. The PVC pipe will be capped with a one (1) inch PVC cap, 1/4" inch NPT hose barb, and 1/4" tubing, plugged or capped.

Quarterly, a landfill employee will visit each monitoring point. The monitoring points consist of all methane probes. Using the detection instrument, he will determine if methane gas has filled the probes. If the probe is near the property line and methane gas is detected at or beyond the lower explosive limit, it must then be determined if the gas is migrating across the landfill boundary. If the probe is on the boundary or methane gas has migrated beyond the boundary, a remediation plan must be completed by the owner.

Other points of monitoring will be the landfill structures. Each structure will be monitored for methane gas using the following methods:

1. All crawl spaces will be monitored;

2. All corners in the structure will be monitored;

3. Any holes, cracks and pipes through the foundation will be monitored.

The concentration of explosive gases generated by the facility shall not exceed twenty-five (25) percent of the lower explosive limit for the gases in facility structures.

Leachate Management

Since this is an “inert debris” landfill, leachate should not exist. Material which might produce leachate is prohibited from disposal in this facility.

The disposal areas will be graded in such a manner so as to prevent stormwater from ponding in the cells. The runoff will be channel by way of diversion ditches and vegetated berms to permanent riser basins. In no case will stormwater runoff be allowed to discharge directly into wetlands or streams.

Emergency Plan

Equipment used in the operation of the landfill shall be used to control accidental fires. This equipment shall include a bulldozer, track excavator and dump truck. If necessary, additional equipment will be acquired from other sources.

In the case of a fire, the following actions shall be taken:

1. Notify the City of Raleigh Fire Department and the Wake County Division of Solid Waste.

2. Separate the burning material from the remaining waste as soon as possible.

3. Attempt to smother the fire with soil if possible.

4. Water should be used to extinguish the fire as a last resort. Should it be necessary to use water, diversion ditches should be cut to direct the water towards the sediment basins. All efforts should be made to prevent contaminated water from flowing directly into creeks or wetland areas.

5. Follow all instructions as directed by the Wake County Division of Solid Waste and the North Carolina Division Waste Management.

In the case of a hazardous spill, the following actions shall be taken:

1. Notify the City of Raleigh Fire Department, the Wake County Environmental Health Response/Hazardous Waste, and the Wake County Division of Solid Waste.

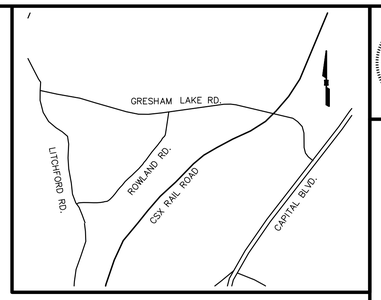
2. Isolate the spilled material and wait for instructions from the City of Raleigh Fire Department.

Permit Application

ROWLAND LANDFILL

TREATMENT AND PROCESSING FACILITY

Raleigh, North Carolina



VICINITY MAP
NTS

OWNER/DEVELOPER:

ROWLAND LANDFILL INC
2730 ROWLAND RD STE 105
RALEIGH NC 27615-5631

ENGINEER:

John A.K. Tucker, P.E. -
Consulting Engineer
P.O. Box 297
Fuquay-Varina, NC 27526
Office 919- 567-0483

GENERAL NOTES:

1. Boundary information taken from Wake County GIS and deed information

2. All site improvements shall be constructed in accordance with Wake County and State of NC standards.

3. Location of existing utilities is approximate. Contractor shall verify location of all existing utilities and shall be responsible for any damage resulting from his actions. Call NC ONE CALL

4. Contractor shall notify Engineer and Owner of conflicts, errors, ambiguities or discrepancies which Contractor discovers in the drawings.

5. Contractor shall at all times maintain adequate safety measures , activities, and barricades, for the protection of all persons on or about the site.

ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE APPLICABLE REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH DIVISION OF THE NC DEPARTMENT OF LABOR.

Contractor shall be responsible for the design of adequate shoring and bracing in all trenches and excavations that are a part of the construction operations of this project. Contractor shall be responsible for installation and maintenance of adequate shoring and bracing, and the protection of all persons and property on or about the site.

PRELIMINARY
NOT FOR CONSTRUCTION

November 20, 2006

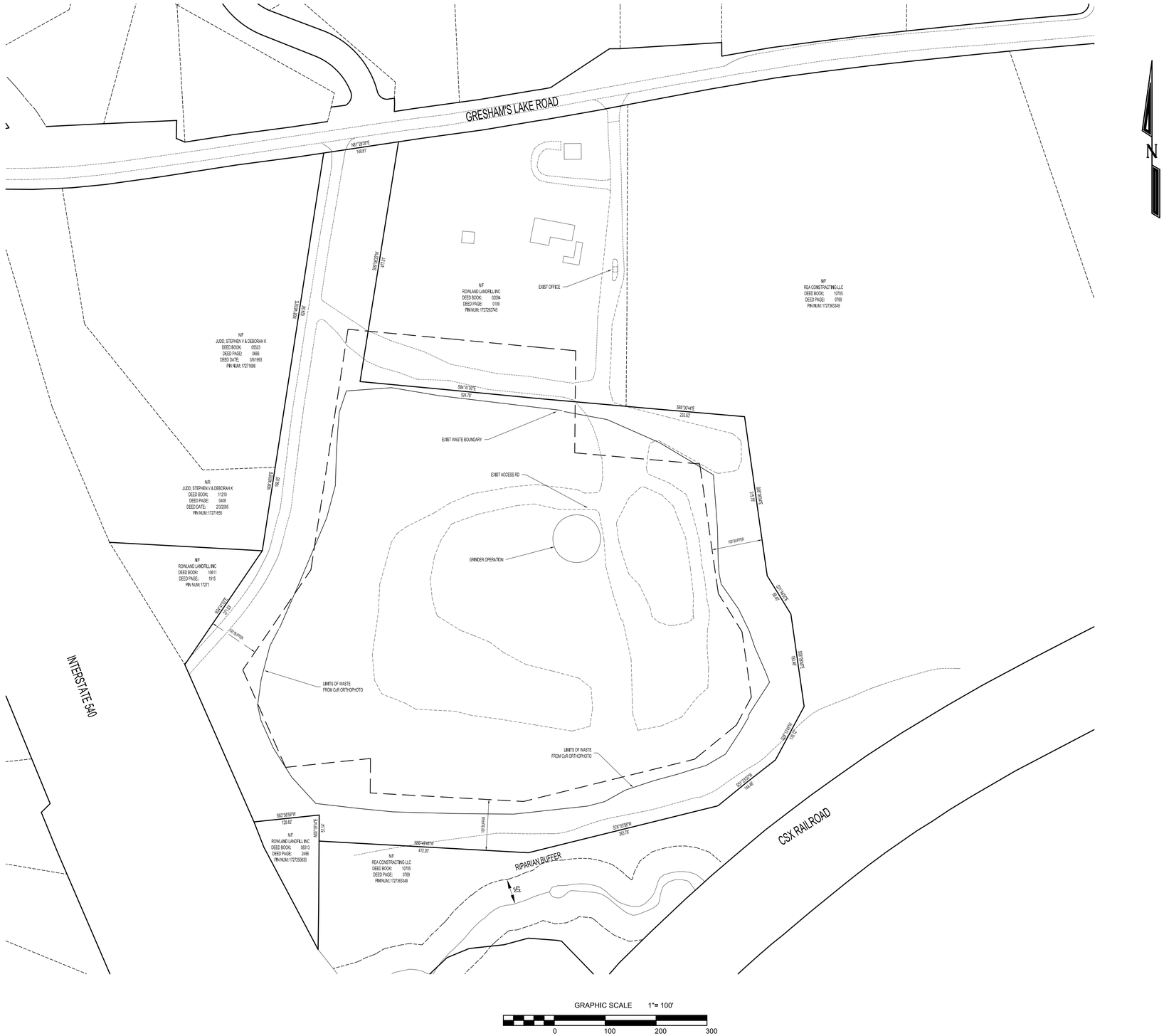
John A. K. Tucker, P.E.
Consulting Engineer
P.O. Box 297 Fuquay-Varina, North Carolina 27526
(919) 567-0483 fax: (919) 567-3611
Email: johnak@johntuckerpe.com

Rownland Landfill, Inc.
2730 Rowland Rd. Suite 105
Raleigh, North Carolina 27615

Rowland Landfill Treatment and Processing Facility

Existing Conditions

REVISIONS



PRELIMINARY
NOT FOR CONSTRUCTION

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Email: johnak@johntuckerpe.com

November 20, 2006

Rownland Landfill, Inc.
2730 Rowland Rd, Suite 105
Raleigh, North Carolina 27615

Rowland Landfill Treatment and Processing Facility

Site Plan

REVISIONS